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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,281	09/28/2000	Gustavo R. Paz-Pujalt	81639RLO	9171

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Patent Legal Staff
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EXAMINER

MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 11/28/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/672,281

Applicant(s)

PAZ-PUJALT ET AL.

Examiner

DANIEL G MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 recites the limitation "making payment for the material failure". It is unclear as to who is making payment to whom. Please clarify.

Since claims 11-12 directly depend on claim 10, they are also rejected under 35 U.S.C. 112, second paragraph, for the same reason set forth above for claim 10.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuentes (5,657,003).

With regard to claim 1, Fuentes discloses a method for capturing images of ground locations and for detecting the presence of material failure(s) or failures in man-made structures, i.e., wall, in such ground locations (See for example, col. 2, lines 49-61 given the teaching described in this section, the wall structure is generally located on ground locations) comprising the steps of:

(a) providing an image sensor, i.e., video camera, spaced remotely from the ground and which sequentially captures a number of images of various ground locations to provide digital images (See for example, col.3, lines 2-16); (b) processing captured digital images to determine the presence of a potential material failure, i.e., degradation of the wall and/or structural degradation, in a man-made structure in accordance with predetermined coordinate positions which locate the man-made structures in one or more of the captured digital images and (c) indicating to a customer that a potential material failure has been detected, i.e., alerting rescue workers and others around the disaster site that further structural degradation is imminent using an alarm signal upon detection of movement of the light spot beyond preset parameters, in a predetermined coordinate position (See col. 3, lines 16-52). While Fuentes does not explicitly use the language an image sensor spaced remotely from the ground, at col. 5, lines 12-15, Fuentes states: “the physical location of the laser transit assembly 10 and high resolution video camera 30 is not critical due to the fact that only relative motion of the wall or structure 15 is desired.” What this means is that the video camera which captures images of the wall or structure can be located remotely or locally, and thus it would have been obvious to an ordinary artisan that the position of video camera shown in Figure 1 not to be seen as restrictive, and can be placed at a remote location from the wall structure.

With regard to claim 2, the method of claim 1 further including: (d) sending captured processed digital images with detected potential material failures to a customer (See for example, col. 3, lines 20-46).

With regard to claim 3, the method of claim 1 wherein the digital image processing includes comparing previously captured digital images with newly, i.e., current, captured digital

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images to determine variations in the captured digital images at the predetermined coordinates which indicate a potential material failure in a manmade structure (See for example, col. 4, lines 30-58).

With regard to claim 4, the method according to claim 1 wherein the digital images are captured by a capture device which is located in a fixed structure position above the ground location or in a moving structure such as an aircraft or satellite (which reads on col. 5, lines 12-15).

With regard to claim 5, the method of claim 3 wherein the image processing includes storing in memory a representation of different material failures, i.e., movement of wall or structure, building or bridges, etc., to be detected and comparing the captured digital image with the material failures to determine the presence of a material failure, type of material failures and location of the material failures (See for example, col. 4, lines 44-45; and col. 5, lines 1-6).

5. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuentes as applied to claims 1-5 above, and further in view of Murphy, et al. (5,126,654).

Claim 6 is rejected the same as claim 1. Thus argument similar to that presented above for claim 1 is equally applicable to claim 6. Claim 6 distinguishes from claim 1 only in that it recites the limitation detecting the presence of material failure(s) or failures in man-made structures having a detectable chemical agent. While Fuentes discloses all of the claimed subject matter, Fuentes is silent as to the introduction of chemical agent used to detect the presence of material failure in man made structure(s). However, Murphy, et al. detects a pipeline failure by using corrosion, which is an electrochemical process which involves metal oxidation and mass

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and charge transport between an electrode and a surrounding electrolyte (See for example, col. 1, lines 32- 36).

Fuentes and Murphy, et al. are combinable because they are from the same field of endeavor, i.e., failure detection in man made structures (See col. 1, lines 32-33). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Murphy, et al. with Fuentes. The motivation for doing so is to provide a chemical substance, and to do so would at least aid the process of identifying failures in man made structures. Therefore, it would have been obvious to combine Murphy, et al. with Fuentes to obtain the invention as specified in claim 6.

With regard to claim 7, the method of claim 6 wherein the chemical agent includes materials which when leaked from a receptacle are adapted to be detected (col. 1, lines 41-49 of Murphy, et al.).

With regard to claim 8, the method of claim 6 wherein the chemical agent includes materials which when released react with substances, i.e., soil, in the ground to provide a detectable material failure to the image sensor (See for example, col. 1, lines 38-44 of Murphy, et al.).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuentes as applied to claims 1-5 above, and further in view of Bell, et al. (4,124,990).

Claim 9 is rejected the same as claim 1. Thus, argument analogous to that presented above for claim 1 is not repeated herein, but is incorporated by reference. Claim 9 distinguishes from claim 1 only in that it recites correcting material failures. While Fuentes discloses all of the claimed subject matter, Fuentes does not explicitly call for correcting material failures.

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However, Bell, et al. (col. 2, lines 11-13) teaches this feature. Therefore. It would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Bell, et al into the system of Fuentes, if for no other reason than to correct or prevent degradation/failure in man made structures.

7. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuentes in view of Bell, et al. as applied to claim 9 above, and further in view of Rosen (6,336,095).

Claim 10 is rejected the same as claim 9. Thus, argument analogous to that presented above for claim 9 is not repeated herein, but is incorporated by reference. Claim 10 distinguishes from claim 9 only in that it recites making payment for the material failure. However, Rosen (col. 30, lines 43-47) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching as taught by Rosen into the system of Fuentes (as modified by Bell, et al.), if for no other reason that to refund payment made on a damaged material to the customer or replace the damaged material with a new one.

With regard to claim 12, the method of claim 10 wherein the image processing includes comparing previously captured images with newly captured images to determine variations in a ground condition which could contain the material failure (See for example, col. 4, lines 30-58 of Fuentes).

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuentes in view of Bell, et al. and Rosen as applied to claim 10 above, and further in view of Murphy, et al. (5,126,654).

With regard to claim 11, Fuentes (as modified by Bell, et al and Rosen) discloses all the

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claimed subject matter except explicitly calling for providing a chemical agent that includes which materials which when released reacts with substances in the ground to provide a detectable material failure to the image sensor. However, Murphy, et al. detects a pipeline failure by using corrosion, which is an electrochemical process which involves metal oxidation and mass and charge transport between an electrode and a surrounding electrolyte (See for example, col. 1, lines 32- 36).

Fuentes (as modified by Bell, et al and Rosen) and Murphy, et al. are combinable because they are from the same field of endeavor, i.e., failure detection in man made structures (See col. 1, lines 32-33). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Murphy, et al. with Fuentes (as modified by Bell, et al and Rosen). The motivation for doing so is to provide a chemical substance, and to do so would at least aid the process of identifying failures in man made structures. Therefore, it would have been obvious to combine Murphy, et al. with Fuentes (as modified by Bell, et al and Rosen) to obtain the invention as specified in claim 11.

Conclusion


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 4987412, 5026141, 5444241, 5686674, 6178253, and 6560729.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.


DANIEL MARIAM
PRIMARY EXAMINER
November 20, 2003